

(5) Abstract: The invention relates to a water filter and a method for the production thereof. The inventive filter comprises a body provided with an inlet, outlet and drain pipe which are provided with lock valves and a main filtering element. Said filtering element is made of an ion-exchange material and comprises input and output surfaces for filtrated liquid. Said invention is characterised in that the ion-exchange material is embodied in such a way that it is voluminous, has a required shape, is reinforced with a rigid reinforcement which is fixed to a perforated support, and forms a continuous porous frame from spherocolloids having required pore sizes which are defined by required cleaning parameters, the volume of the filtering mass of the element material being calculated according to mathematical expressions. The input surface of the main filtering element is coated with an additional filtering and correcting layer of a fine substance which is introduced in the form of a powder through a loading valve in the cavity of the body in a filtered liquid flow. Said liquid flow is deposited on the input surface of the main filtering element and dynamically retained thereon by ram pressure of liquid. The powder granule sizes are higher than the pores of the ion-exchange material, and the volume thereof corresponding to the shape of the main filtering element is defined according to mathematical expressions. Said filter

makes it possible to efficiently remove harmful impurities and pathogenic bacteria from water. The structural design of the filter is protected against instantaneous pollution and prevents the poisoning of the filtering element.